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МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Hand- and machine-operated circular screwing dies and hand-operated die stocks

Filières rondes de filetage, à main et à machine, et porte-filière à main

Sample Document

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Reference number
ISO 2568 : 1988 (E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 2568 was prepared by Technical Committee ISO/TC 29, *Small tools*.

This second edition cancels and replaces the first edition (ISO 2568 : 1973), of which it constitutes a minor revision. It incorporates amendments 1 and 2, published in 1977 and 1983 respectively, and a new clause 5 "Marking" has been added.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

Hand- and machine-operated circular screwing dies and hand-operated die stocks

1 Scope and field of application

This International Standard specifies the general dimensions of hand-operated and machine-operated screwing dies. These dimensions, established as a function of the thread diameter and pitch, are the following:

- outside diameter;
- thickness;
- cutting portion length;
- general dimensions of attachment.

It also gives the interchangeability dimensions of hand-operated die stocks.

This International Standard is applicable to screwing dies intended for the manufacture of the following threads:

- ISO metric threads:
 - coarse thread, from M1 to M68;
 - fine thread, from M1 to M56.
- ISO inch threads:
 - “Unified coarse” series (UNC), from No. 1 — 64 to 2 3/4 — 4;
 - “Unified fine” series (UNF), from No. 0 — 80 to 1 1/2 — 12.

The dimensional characteristics of circular screwing dies, as a function of thread diameters and pitches, are given in annex A.

The general dimensions of screwing dies for threads which are not dealt with in this International Standard, and therefore are not recommended, are given for guidance only in annex B. Annex B is applicable to screwing dies for inch threads of the following types:

- B.1 — “British Standard Whitworth” (BSW).
- B.2 — “British Standard Fine” (BSF).
- B.3 — “British Association” (BA).

All screwing dies are available in two classes, namely

- non-precision screwing dies;
- precision screwing dies.

2 ISO metric threads

Screwing dies with:

$D = 16$ and 20 mm

$D > 25$ mm

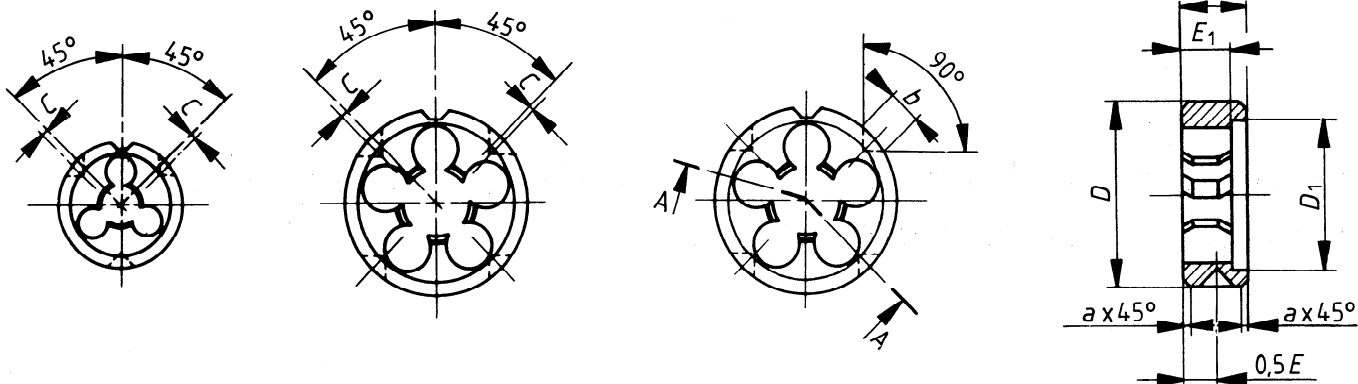


Figure 1 — Metric screwing dies

2.1 Coarse thread

Table 1

Dimensions in millimetres

Designation	d nom.	Pitch	D	D_1	E	E_1	C	b	a								
M1	1	0,25	16	11	5	2,5	0,5	3	0,2								
M1,1	1,1																
M1,2	1,2																
M1,4	1,4																
M1,6	1,6	0,35			5	2,5	0,5	3									
M1,8	1,8																
M2	2	0,4			5	2,5	0,5	3									
M2,2	2,2	0,45															
M2,5	2,5																
M3	3	0,5	20	14	5	2,5	0,5	3	0,2								
M3,5	3,5	0,6															
M4	4	0,7															
M4,5	4,5	0,75															
M5	5	0,8			7	2,5	0,5	3									
M6	6	1															
M7	7																
M8	8	1,25															
M9	9																
M10	10	1,5	30	22	11	2,5	0,5	3	0,2								
M11	11																

Designation	d nom.	Pitch	D	E	C	b	a
M12	12	1,75	38	14	1,2	6	1
M14	14	2					
M16	16						
M18	18	2,5	45	18*			
M20	20						
M22	22						
M24	24	3	55	22	1,5		
M27	27						
M30	30						
M33	33	3,5	65	25	1,8	8	2
M36	36	4					
M39	39						
M42	42	4,5	75	30			
M45	45						
M48	48	5	90	36			
M52	52						
M56	56	5,5	105	36	2,5	10	
M60	60						
M64	64	6	120	36			
M68	68						

* For an M16 die, this dimension is an exception to the general table (table 6) given in annex A.

NOTES

1 The shape of the V-groove is left to the discretion of the manufacturer. Screwing dies are generally supplied with two chamfers at the thread entrance, according to the material to be threaded and at the discretion of the manufacturer.

2 Tolerances:

- for precision screwing dies:
 - on D : f10
 - on E : js12
- for non-precision screwing dies:
 - on D and E : the tolerances are left to the discretion of the manufacturer.

2.2 Fine thread

Table 2

Dimensions in millimetres

Designation	d nom.	Pitch	D	D_1	E	E_1	C	b	a					
M1 × 0,2	1	0,2	16	11	5	2		3	0,2					
M1,1 × 0,2	1,1													
M1,2 × 0,2	1,2													
M1,4 × 0,2	1,4													
M1,6 × 0,2	1,6													
M1,8 × 0,2	1,8													
M2 × 0,25	2	0,25	20		5			4						
M2,2 × 0,25	2,2													
M2,5 × 0,35	2,5	0,35								15	3	0,5		
M3 × 0,35	3													
M3,5 × 0,35	3,5													
M4 × 0,5	4	0,5												
M4,5 × 0,5	4,5													
M5 × 0,5	5													
M5,5 × 0,5	5,5													
M6 × 0,75	6	0,75								25	7	0,6		
M7 × 0,75	7													
M8 × 1	8	1							30	9	0,8		5	0,5
M9 × 1	9													
M10 × 1	10	1,25							38	11	1			
M10 × 1,25	1,25													
M12 × 1,25	12	1,5												
M12 × 1,5	1,5													
M14 × 1,25	14	1,25		10										
M14 × 1,5	1,5													
M15 × 1,5	15	1,5				1,2	6							
M16 × 1,5	16													
M17 × 1,5	17	1,5	45	14										
M18 × 1,5	18													
M18 × 2	18	2												
M20 × 1,5	20	1,5												
M20 × 2	20	2												
M22 × 1,5	22	1,5												
M22 × 2	22	2												
M24 × 1,5	24	1,5												
M24 × 2	24	2				1,5								
M25 × 1,5	25	1,5												
M25 × 2	25	2					8							
M27 × 1,5	27	1,5												
M27 × 2	27	2												
M28 × 1,5	28	1,5												
M28 × 2	28	2	65		18		1,8							

For the shape of the V-groove and the tolerances, see notes 1 and 2 in 2.1.

Designation	d nom.	Pitch	D	E	C	b	a
M30 × 1,5	30	1,5	65	18			1
M30 × 2		2					
M30 × 3		3					
M32 × 1,5	32	1,5	75	18			
M32 × 2		2					
M33 × 1,5	33	1,5					
M33 × 2		2					
M33 × 3		3					
M35 × 1,5	35	1,5					
M36 × 1,5		1,5					
M36 × 2		2					
M36 × 3	36	3					
M39 × 1,5		1,5					
M39 × 2	39	2					
M39 × 3		3					
M40 × 1,5	40	1,5					
M40 × 2		2					
M40 × 3		3					
M42 × 1,5	42	1,5					8
M42 × 2		2					
M42 × 3		3					
M42 × 4	45	4					
M45 × 1,5		1,5					
M45 × 2		2					
M45 × 3	48	3					
M45 × 4		4					
M48 × 1,5		1,5					
M48 × 2	50	2					
M48 × 3		3					
M48 × 4		4					
M50 × 1,5	52	1,5					2
M50 × 2		2					
M50 × 3		3					
M52 × 1,5	55	1,5					
M52 × 2		2					
M52 × 3		3					
M52 × 4	56	4					
M55 × 1,5		1,5					
M55 × 2		2					
M55 × 3	105	3					
M55 × 4		4					
M56 × 1,5		1,5					
M56 × 2	56	2					
M56 × 3		3					
M56 × 4		4					